



Article

Remote Meeting Adoption and Administrative Efficiency of Commercial Banks in Rivers State, Nigeria

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Abstract: The issue of administrative efficiency has been more crucial to commercial banks that are in digitally changing and competitive environments. This paper has analyzed the association between the adoption of remote meetings and administrative efficiency of commercial banks in Rivers State, Nigeria, and ICT security infrastructure as a moderating factor. The study was based on the Resource-Based View (RBV) and conceptualised the adoption of remote meetings as a strategic digital capability in terms of technology availability, frequency of use, and user competence, and administrative efficiency in terms of time-management efficiency, cost efficiency, and work coordination. The cross-sectional survey design was taken. The sample size was 252 administrative and operations employees in twenty-eight (28) sampled commercial banks in Port Harcourt, of which 233 employees responded and the response rate was 92 per cent. The instrument used in the research showed good reliability (Cronbachs Alpha = 0.81). Pearson Product-Moment Correlation was used to analyse the data at a level of significance of 0.05. The results showed that there was a strong positive correlation between technology availability and time-management efficiency ($r=0.611$, $p=0.002$), moderate positive correlation between frequency of use and cost efficiency ($r=0.522$, $p=0.000$), and strong positive correlation between user competence and work coordination ($r=0.600$, $p=0.000$). These findings suggest that the availability of technology and user competence have a greater impact on administrative performance, whereas regular use has a significant positive effect on cost management. The research concludes that the adoption of remote meetings with the assistance of a well-developed ICT security infrastructure is a useful organisational resource that can improve the efficiency of administration in commercial banks. The research suggests that financial institutions should enhance digital infrastructure, institutionalise frequent platform use, and invest in ongoing employee education and reinforce cybersecurity systems to maintain efficiency benefits.

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Keywords: Remote meeting adoption; administrative efficiency; ICT security infrastructure; digital transformation; commercial banks..

1. Introduction

Background to the Study

The efficiency of administration is one of the key determinants of performance and sustainability in commercial banking institutions. In Nigeria, and especially in Rivers State, where the banking operations support an active commercial and oil-based economy, the ability of banks to handle internal operations has become a critical issue.

Administrative efficiency is not limited to the normal clerical roles; it is the ability of an institution to mobilize time, contain the cost of operation and coordinate the activities of departments and staff. In a digital age of increased regulatory demands, internal communication and coordination inefficiencies may undermine responsiveness, bloat operational costs, and institutional competitiveness.

Efficiency in time management is one of the key pillars of banking. Commercial banks are governed by strict regulatory schedules and service standards that require quick execution of tasks, strict schedule compliance and quick reaction to internal and external pressures. The recent studies of digital transformation in banking prove that systems supported by technology can significantly improve the responsiveness of operations by reducing delays in the process and simplifying communication channels [1]. Organizations that incorporate digital communication technologies into their administrative processes often note a reduction in decision-making time and the continuity of the workflow. In this regard, time efficiency has been closely associated with the efficiency of digital collaboration systems.

Cost efficiency holds a parallel strategic position in banking administration. Physical meetings, travelling between branches and manual documentation are very costly to the operations. The shift to digital collaboration platforms has been linked to decreased overhead spending, resource optimization, and increased value creation based on technological investments [2]. In developing economies, the digital transformation is not always sought with the aim of increasing financial inclusion but also to justify administrative costs. However, the degree to which these cost advantages are realised depends on the effectiveness with which digital tools are implemented and controlled in institutions.

Administrative efficiency in commercial banks is also characterized by work coordination. Banking business involves interconnected units, such as risk management, credit administration, compliance, operations, and customer service, which require constant interaction and information sharing. The studies on the digitalisation of financial systems highlight that integrated communication technologies can improve the tracking of tasks, real-time information exchange, and organisational alignment [3]. Disjointed coordination systems normally lead to duplication of efforts and slow decision making. Therefore, good administrative systems are based on organised communication platforms that can coordinate the activities of institutions.

In this changing administrative environment, the adoption of remote meetings has become a relevant aspect of organisational change. Remote meeting adoption refers to the methodical use of video-conferencing tools and virtual collaboration systems to hold meetings and organize institutional processes. The rapid pace of remote working in the Nigerian banking industry, especially following the COVID-19 pandemic, has redefined traditional communication patterns [4]. Virtual platforms have become an essential part of strategic discussions, compliance discussions, and coordination between branches. The success of remote meetings heavily relies on the presence of technological infrastructure: good video-conferencing software, a good internet connection, and proper meeting equipment are the foundation of a smooth virtual communication. According to Munira, the lack of technological infrastructure may undermine the efficiency benefits of remote collaboration [3]. In areas where connectivity issues continue to be a problem, disruptions and inefficient system operation can hinder effective interaction.

In addition to infrastructure, the frequency of the use of remote meeting platforms determines their role in the administrative outcomes. Regular use creates familiarity in the institution, standardisation of communication processes, and reduces the use of physical meetings that are resource-intensive. Empirical studies indicate that organisations that integrate virtual platforms in the daily administrative operations have improved coordination and flexibility [4]. Sporadic adoption, on the contrary, impedes institutional learning and reduces the possible efficiency gains. The effectiveness of

remote meeting systems is also influenced by the competence of the users. The ability to use technical skills, knowledge of digital features, and the ability to navigate virtual platforms will define whether such technologies will increase productivity or create more challenges. Research on the adoption of digital banking highlights the fact that user capability is a determining factor in the exploitation of technological innovations [5]. Without proper training and digital literacy, remote meeting systems can create delays and communication gaps instead of solving them.

Although the adoption of remote meetings has potentials of enhancing administrative efficiency, its success is unquestionably dependent on the strength of ICT security infrastructure. Commercial banks are sensitive data environments, which deal with confidential financial data and strategic institutional data. The spread of digital communication channels is bound to expose more people to cybersecurity threats. A study on the banking practices in Nigeria indicates that effective cybersecurity systems are essential in protecting online activities [6].

Firewall protection, data encryption, and access control systems are important elements of ICT security infrastructure. These are to guarantee the confidentiality, integrity, and controlled access of virtual communication platforms. Research on cybersecurity in new financial systems shows that a lack of protection may undermine trust in digital platforms and limit their use [7][8]. On the other hand, effective security systems enhance institutional trust in online collaboration tools and support long-term use.

The relationship between remote meeting adoption and administrative efficiency in the context of commercial banks in Rivers State is thus determined by technological preparedness, user capacity, and cybersecurity strength. When institutions integrate the availability of digital platforms with qualified human resources and safe ICT infrastructure, they have a higher chance of achieving gains in time management, cost control, and effectiveness of coordination. In the context of security weaknesses or infrastructural shortcomings, the expected advantages of remote meeting systems can be diluted. The present study is based on the assumption that the administrative efficiency, including its manifestations in the form of effective time management, cost efficiency, and coordinated work processes, can be affected by the introduction of remote meeting technologies significantly. It also acknowledges ICT security infrastructure as a situational variable that can either enhance or dilute this relationship. The study will add to the growing literature on digital transformation and institutional efficiency in emerging financial systems by analyzing these dynamics in commercial banks in Rivers State, Nigeria.

Statement of the Problem

Although the banking industry in Nigeria is increasingly becoming digitalized, many commercial banks in Rivers State continue to grapple with high levels of administrative inefficiencies. These shortcomings are reflected in the form of long delays in performing tasks, weak compliance with timetables, high operational costs, and inefficient inter-departmental communication. This dilemma persists despite these institutions investing significant resources in digital communication tools, such as remote meeting tools that are claimed to improve internal cooperation and responsiveness. Ideally, the adoption of remote meeting tools should optimize time-management effectiveness, reduce administrative expenses, and enhance organizational coordination. However, in many cases, empirical observations show that these expected benefits and real results are not the same.

A number of situational limiting conditions, including unstable internet access, lack of conferencing equipment, intermittent use of online platforms, and limited technical skills of employees, can significantly undermine the performance of remote meetings. Additionally, the ongoing fears about cybersecurity, including the presence of weak firewall settings, weak data encryption measures, and weak access controls, make it

difficult to believe in the stability and sustainability of digital collaboration systems in banking organizations. In cases where the information and communications technology (ICT) security infrastructure is found wanting, the implementation of remote platforms is usually restrained, thus restricting their potential impact on administrative efficiency.

The current academic research on the topic of digital transformation in the banking sector has focused on customer-facing innovations, and little focus has been on how the adoption of remote meetings affects the performance of the internal administration. Moreover, empirical studies that measure the moderating role of ICT security infrastructure on this relationship, that is, in the context of commercial banks in Rivers State, are exceptionally thin. This gap poses a practical and theoretical dilemma, with banks continuing to invest in digital tools on a large scale without clear-cut information on their implications on administrative effectiveness. The current research therefore attempts to fill this gap in the literature by examining the relationship between the adoption of remote meetings and administrative efficiency, and the moderating role of ICT security infrastructure.

Conceptual Framework

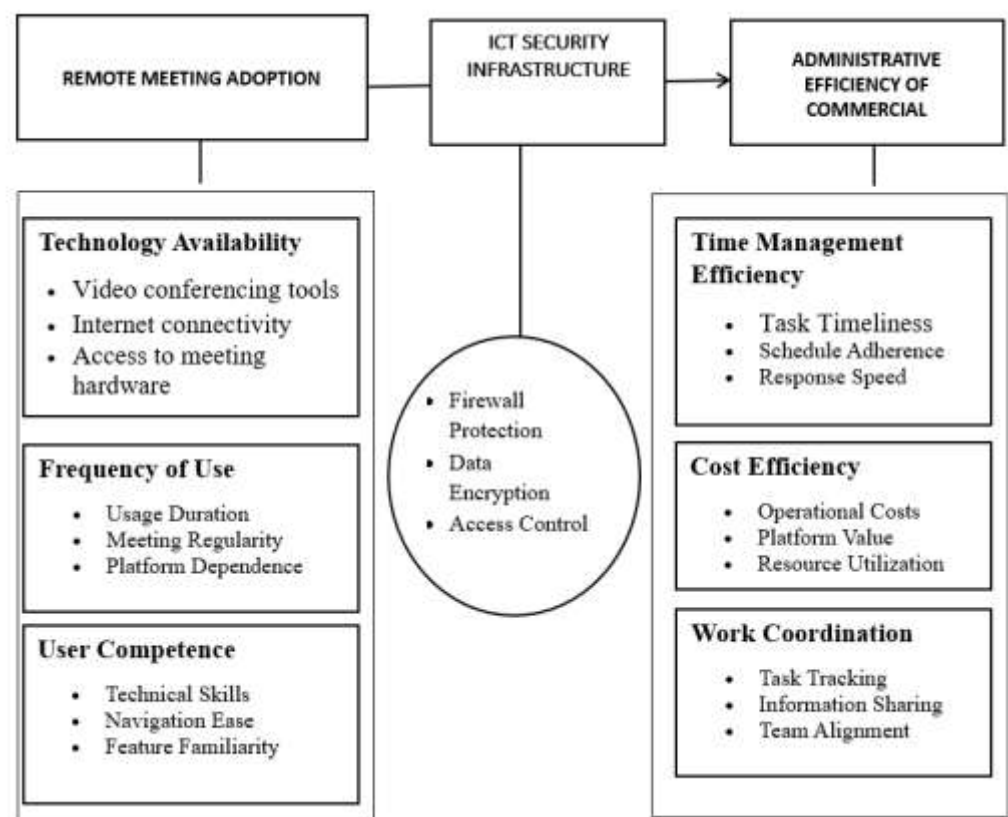


Figure 1. Conceptual Framework of Remote Meeting Adoption, ICT Security Infrastructure, and Administrative Efficiency

Source:adopted from Onubuogu et al. (2014) and moderated by the researcher, (2026)

Aim and Objectives of the Study

The aim of this study is to examine the relationship between remote meeting adoption and administrative efficiency of commercial banks in Rivers State Nigeria. Specifically the study sought to:

1. Determine the relationship between technology availability and time management efficiency of commercial banks in Rivers State Nigeria.

2. Investigate the relationship between frequency of use and cost efficiency of commercial banks in Rivers State Nigeria.
3. Examine the relationship between user competence and work coordination of commercial banks in Rivers State Nigeria.

Research Questions

In line with the stated objectives, the following research questions guided the study:

1. What is the relationship between technology availability and time management efficiency of commercial banks in Rivers State Nigeria?
2. What is the relationship between frequency of use and cost efficiency of commercial banks in Rivers State Nigeria?
3. What is the relationship between user competence and work coordination of commercial banks in Rivers State Nigeria?

Research Hypotheses

The following hypotheses were tested in the course of the study at a 0.05 level of significance:

H₀₁: There is no significant relationship between technology availability and time management efficiency of commercial banks in Rivers State Nigeria.

H₀₂: There is no significant relationship between frequency of use and cost efficiency of commercial banks in Rivers State Nigeria.

H₀₃: There is no significant relationship between user competence and work coordination of commercial banks in Rivers State Nigeria.

Theoretical Framework

The theoretical foundation of this study is the Resource-Based View (RBV) that Wernerfelt proposed [9] and later expanded by Barney [10]. Resource-Based View is a theory of strategic management, which assumes that the internal resources and capabilities that a firm has are the main determinants of its performance and its ability to maintain a competitive advantage in the market. The theory posits that firms are not homogenous in the resources they have and the differences are what lead to the differences in the performance outcomes of the organizations that operate in the same environment. Barney argues that resources need to be valuable, rare, inimitable, and non-substitutable (VRIN) in order to create sustained performance advantage [10].

RBV divides organizational resources into tangible (including physical infrastructure and technological systems), intangible (including organizational knowledge and reputation), and human resources (including skills, expertise, and experience). The theory presupposes that organizations that successfully acquire, develop, and implement these resources have higher chances of attaining high performance. Notably, RBV underlines that it is not the resources that are important, but the ability of the firm to combine and use them effectively.

The Resource-Based View offers a solid basis to the study of the connection between remote meeting adoption and administrative efficiency in commercial banks in Rivers State, Nigeria. In this context, the availability of technology, such as video-conferencing equipment, internet access, and meeting equipment, is a tangible digital resource. Banks with good and modern communication systems are in a better position to organize activities effectively and minimize administrative delays. Equally, user competence, which is indicated by the technical capabilities of employees, ease of navigation, and knowledge of the platform features, is a vital human resource capability. Qualified staff increases the efficient use of digital systems, which increases the timeliness of tasks, schedule compliance, and the speed of response.

Moreover, frequency of use could be conceptualized as an organizational capacity that indicates the extent to which digital resources are integrated into the daily administrative operations. Regular and planned application of remote meeting platforms will turn technological resources into operational advantages that enhance coordination and cost-effectiveness. In the RBV perspective, the combination of digital infrastructure

and user competence and their systematic implementation can be viewed as performance-enhancing capabilities that add to the efficiency of the administration.

ICT security infrastructure is also a moderating variable that is supported by the theory. Firewall protection, data encryption, and access control systems are tactical technological controls that safeguard the digital resources against external threats. In the RBV framework, ICT security infrastructure can be considered as a resource of value and protection that maintains the integrity and reliability of digital systems. In the case of strong security mechanisms, remote meeting technologies can be used with confidence, which enhances their effectiveness on the efficiency of administration. On the other hand, poor security infrastructure can compromise the worth of digital resources and reduce performance benefits.

The use of RBV in the current research is thus warranted since it offers a logical explanation of the role of internal digital resources and human capabilities in promoting administrative efficiency in commercial banks. Within the framework of Rivers State, where banks are regulated and operate in a similar environment and under the same conditions, the disparity in digital infrastructure, user competence, and security systems could be the reason behind the differences in administrative performance. Resource-Based View therefore provides a powerful theoretical perspective to the adoption of remote meetings, which is facilitated by effective ICT security infrastructure, in improving the efficiency of administration in commercial banking institutions.

Conceptual Review

Concept of Remote Meeting Adoption

Remote meeting adoption refers to the methodical adoption, incorporation, and continued use of electronic communication tools, including video conferencing applications, cloud-based collaboration tools, and virtual conferencing tools, to conduct organisational meetings and administrative communications. It represents a tactical shift of traditional face-to-face meetings to technology-mediated spaces that support synchronous and asynchronous interaction between different locations. In this regard, remote collaboration technologies are not just a matter of acquisition, but are integrated into everyday organisational practices and decision making frameworks. Onyemere, Okafor, and Eze note that these technologies increase institutional flexibility and responsiveness when fully integrated [4]. In financial institutions, remote meeting adoption facilitates inter-branch coordination, compliance audit, managerial discussions, and monitoring of operations, thus acting as a technological innovation and organisational change mechanism to enhance the efficiency of communication and overall performance.

Remote Meeting Adoption Dimensions

Technology Availability: Technological availability is the level of accessibility of the infrastructure needed to conduct effective virtual meetings by an organisation. This includes a good internet connection, working video-conferencing devices, and proper hardware including computers, webcams, microphones, and displays. The study of cloud-computing emphasizes the fact that digital systems cannot improve performance without a stable infrastructure base [11]. In the banking institutions, constant connectivity and availability of the modern communication tools are the key to smooth administrative interaction. Therefore, the availability of technology defines the possibility of remote meetings to be conducted effectively without technical inconveniences that may hinder productivity.

Frequency of Use: Frequency of use is a measure of the regularity of the use of remote meeting platforms in organisational activities. It records the time spent using it, the frequency of meetings, and the degree of reliance on digital platforms to coordinate. Frequent use creates familiarity in the institutions, reduces resistance to change in technology and promotes standardisation of processes. Onyemere et al. posit that organisations that integrate virtual meeting systems into their daily schedules enjoy better

communication flow and flexibility in operations [4]. Therefore, a high frequency of use indicates that digital meetings are regular elements of administrative practice, and not infrequent alternatives.

User Competence: User competence refers to the knowledge, skills, and confidence that employees have to use digital meeting platforms in a competent manner. It encompasses technical capabilities, usability, and acquaintance with advanced functionalities like screen sharing, breakout rooms, file integration, and recording. The research on adoption shows that the effectiveness of technology is dependent on user capability and digital literacy [5]. Poor competence may result in time wastage, lack of communication, and poor use of platform features. Thus, user competence will guarantee the use of remote meeting technologies in the best way to improve administrative results.

Concept of Administrative Efficiency: Administrative efficiency is the ability of an organisation to accomplish its goals by using the best use of time, financial resources and human capital and having a well-organised coordination and minimal wastage. It is a representation of efficiency in the organisation, direction and control of institutional processes to ensure maximum productivity and minimum redundancy. Administrative efficiency in the banking industry ensures that decisions are made on time, that there is compliance with regulations and that operations run smoothly. Bueno, Sigahi, and Rampasso relate administrative efficiency to the optimisation of internal processes through digital transformation and systematic management systems [1]. Effective administration increases institutional responsiveness, strengthens accountability, and enhances precision in workflow. Technological integration and communication systems that facilitate internal processes are becoming more important in administrative efficiency in the modern financial institutions.

Administrative Efficiency Measures

Time Management Efficiency: Time-management efficiency refers to the ability of an organisation to accomplish tasks in time, meet the set deadlines, and react quickly to operational needs. It is manifested in the timeliness of tasks, schedule compliance, and the speed of response in the administrative processes. It is well known that digital technologies reduce the delays in the procedures and enhance the turnaround times [1]. In banking, time management is efficient to make approvals quick, inter-departmental communication fast and meet regulatory deadlines.

Cost Efficiency: Cost efficiency is the capacity of an organisation to reduce the operational costs and maximise the value of technological platforms and institutional resources. It entails the wise use of administrative expenses, platform value assessment, and resource use. According to Al-Hawamdeh, cloud-based systems and digital platforms have the potential to lower infrastructure and coordination expenses in financial institutions [12]. In this regard, cost efficiency is used to determine how well administrative systems can be run in a cost-effective manner without affecting the quality of performance.

Work Coordination: Work coordination is the process of aligning and synchronising work, information and people in an organisation. It involves task-tracking systems, formal information exchange, and interdepartmental alignment. Digital systems that are integrated improve coordination through real-time communication and joint decision-making [13]. Effective coordination in banking operations reduces duplication of effort, communication breakdowns and enhances institutional coherence.

ICT Security Infrastructure Concept: ICT security infrastructure is a combination of the technological systems and security measures put in place to protect digital systems, communication networks, and sensitive information in an organisation. It comprises firewall protection, data encryption protocols, and access-control systems that together guarantee confidentiality, integrity, and availability of information. Firewalls control the traffic on the network and prevent unauthorised external access, and encryption enhances the security of data transmission and storage [14]. Access-control systems, including

authentication and authorisation procedures, limit access to the system to authorised users [15]. The banking industry needs a strong ICT security infrastructure to maintain confidence in online platforms and secure administrative communication. Effective security systems enhance trust in remote meeting technologies and facilitate their regular and safe use in financial institutions.

Empirical Review

Liu, Naveed, and Mustafa used a quantitative panel study to investigate the effects of diffusion of digital technology on the efficiency of commercial banks [16]. They used efficiency estimation methods and secondary financial data of the banking sector to evaluate the impact of ICT availability on operational performance indicators. The results showed that the higher the diffusion of digital technology, the higher the technical efficiency and speed of service delivery in commercial banks. Banks that had greater technological infrastructure had better workflow management and less operational delays, which confirmed that the availability of technology improves operational efficiency — a finding that supports the positive relationship between technology availability, time-management efficiency, and performance of commercial banks in Rivers State settings.

Abu Al-Haija et al. employed a quantitative research design to determine the effects of digital banking transformation platforms on profitability and operational efficiency in Islamic banking institutions [17]. The financial performance data was analyzed using regression analysis, which showed that the availability and integration of digital platforms were the key to the improvement of the operational processes, the decrease of the processing time, and the overall efficiency. Banks with high investments in digital infrastructure had a more coordinated internal operation and quicker service delivery, which aligns with the main argument of the study that the availability of technology enhances efficiency outcomes and promotes the identified relationship between technology availability and time-management efficiency.

Fisabilillah et al. used a data envelopment analysis (DEA) method to evaluate the efficiency of commercial banks in the context of the digitalisation of the financial sector [18]. The discussion looked at the extent of the use of digital systems in terms of cost and operational efficiency. Their results showed that the regular and successful use of digital technologies significantly enhanced cost efficiency and resource utilisation in commercial banks. The institutions that continually embraced and used digital tools indicated reduced costs of operation and increased levels of productivity, thus supporting the idea that frequency of use of digital systems increases cost efficiency and is consistent with moderate positive relationship between frequency of use and cost efficiency in Rivers State commercial banks. The findings of this study are also consistent with Jameaba, who highlighted that digital transformation reduces the cost of operations and increases productivity in the banking industry [19].

Moreover, the study finds that user competence and work coordination have a strong positive correlation. This observation supports the results of Nesindande and Saurombe, who found that digital competence increases workplace performance in banking organisations [20], and the findings of Muduli and Choudhury, who found that workforce digital capability enhances organisational agility and coordination in the banking industry [21].

Names of Commercial Banks in Port Harcourt

Table 1. Names of Commercial Banks in Port Harcourt and Respondent Categories

S/N	Bank Name	Administrative/Operations Staff	Total
1	Citibank	9	9
2	Fcmb	9	9
3	Standard Chartered Bank	9	9

S/N	Bank Name	Administrative/Operations Staff	Total
4	Lotus Bank	9	9
5	Unity Bank	9	9
6	Titan Trust Bank	9	9
7	United Bank For Africa	9	9
8	Taj Bank	9	9
9	Guaranty Trust Bank	9	9
10	Polaris Bank	9	9
11	Ecobank	9	9
12	Suntrust Bank	9	9
13	Zenith Bank	9	9
14	Globus Bank	9	9
15	Sterling Bank	9	9
16	Union Bank	9	9
17	Keystone Bank	9	9
18	First Bank	9	9
19	Stanbic Ibtc	9	9
20	Premium Trust Bank	9	9
21	Providus Bank	9	9
22	Signature Bank	9	9
23	Fidelity Bank	9	9
24	Wema Bank	9	9
25	Parallex Bank	9	9
26	Jaiz Bank	9	9
27	Access Bank	9	9
28	Alpha Morgan	9	9
TOTAL		252	252

Source: Researchers' Fieldwork (2026)

2. Materials and Methods

The study utilized a quantitative approach with a cross-sectional survey design to assess the nexus between remote meeting utilization and administrative efficiency of commercial banks, in Rivers State, Nigeria, with ICT security infrastructure as a moderating variable. The study covered the administrative and operations staff of the twenty-eight (28) commercial banks located in Port Harcourt 252 employees were chosen as a study sample; three respondents from each bank are from this population. The primary tool employed for data collection was a structured questionnaire, which allowed the researchers to gain uniform responses from participants on the availability and usage of remote meeting technologies and on the perceived impact of such technologies on the efficiency of administrative processes. The items in the questionnaire were mostly either indicators of the remote meeting adoption variables (technology availability, use frequency and user competence) or indicators of the administrative efficiency variables (time-management efficiency, cost efficiency and work coordination). The instrument was then reliability tested, resulting in Cronbach's Alpha coefficient of 0.81 which indicates acceptable scale reliability. A total of 233 valid responses were obtained from 252 distributed questionnaires for the analysis, indicating a response rate of close to 92 percent. Out of these 469 data gathered from respondents were coded through and analyzed through the Statistical Package for Social means and sciences (SPSS) version 25.

The relationships pertaining to the study variables were tested using Pearson Product–Moment Correlation at 0.05 level of significance. By using statistical analysis, the researchers established the direction and strength of relationships between remote meeting adoption dimensions and administrative efficiency indicators in 12 sampled commercial banks.

3. Results and Discussion

Result/Finding

Hypothesis One: There is no significant relationship between technology availability and time management efficiency of commercial banks in Rivers State Nigeria.

Table 2. Pearson Correlation Between Technology Availability and Time Management Efficiency

		Technology availability	Time management efficiency
Technology availability	Pearson Correlation	1	.611**
	Sig. (2-tailed)		.002
	N	233	233
Time management efficiency	Pearson Correlation	.611**	1
	Sig. (2-tailed)	.002	
	N	233	233

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS version 25

H₀₁: There is no significant relationship between technology availability and time management efficiency of commercial banks in Rivers State, Nigeria. The result reveals a significant positive relationship ($r = .611$, $p = 0.002$). We reject the null hypothesis and accept the alternative hypothesis: there is a significant relationship between technology availability and time management efficiency of commercial banks in Rivers State, Nigeria.

Hypothesis Two: There is no significant relationship between frequency of use and cost efficiency of commercial banks in Rivers State Nigeria.

Table 3. Pearson Correlation Between Frequency of Use and Cost Efficiency

		Frequency of use	Cost efficiency
Frequency of use	Pearson Correlation	1	.522**
	Sig. (2-tailed)		.000
	N	233	233
Cost efficiency	Pearson Correlation	.522**	1
	Sig. (2-tailed)	.000	
	N	233	233

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS version 25

H₀₂: There is no significant relationship between frequency of use and cost efficiency of commercial banks in Rivers State, Nigeria. The result reveals a significant positive relationship ($r = .522$, $p = 0.000$). We reject the null hypothesis and accept the alternative hypothesis: there is a significant relationship between frequency of use and cost efficiency of commercial banks in Rivers State, Nigeria.

Hypothesis Three: There is no significant relationship between user competence and work coordination of commercial banks in Rivers State Nigeria.

Table 4. Pearson Correlation Between User Competence and Work Coordination

		User competence	Work coordination
User competence	Pearson	1	.600**
	Correlation		
	Sig. (2-tailed)		.000
	N	233	233
Work coordination	Pearson	.600**	1
	Correlation		
	Sig. (2-tailed)	.000	
	N	233	233

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS version 25

H₀₃: There is no significant relationship between user competence and work coordination of commercial banks in Rivers State, Nigeria. The result reveals a significant positive relationship ($r = .600$, $p = 0.000$). We reject the null hypothesis and accept the alternative hypothesis: there is a significant relationship between user competence and work coordination of commercial banks in Rivers State, Nigeria.

Summary of Findings

Table 5. Summary of Hypotheses Testing Results

S/N	Hypotheses	Outcome	Extent of Relationship	Decision
H01	There is no significant relationship between technology availability and time management efficiency of commercial banks in Rivers State, Nigeria.	($r = .611$, $p = 0.002$)	Strong Relationship	Reject Null Hypothesis
H02	There is no significant relationship between frequency of use and cost efficiency of commercial banks in Rivers State, Nigeria.	($r = .522$, $p = 0.000$)	Moderate Relationship	Reject Null Hypothesis
H03	There is no significant relationship between user competence and work coordination of commercial banks in Rivers State, Nigeria.	($r = .600$, $p = 0.000$)	Strong Relationship	Reject Null Hypothesis

Source: SPSS Output from Field Data (2026)

Discussion of Findings

The research shows that there is a strong positive correlation between the availability of technology and efficiency of commercial banks in Rivers State in time management ($r = 0.611$, $p = 0.002$), which is a strong correlation. This observation highlights the significance of the current technological infrastructure, including digital banking systems, automated transaction platforms, and integrated communication tools, in significantly improving the use of time in commercial banking activities. Once technology is easily accessible and fully operational, employees will be able to process transactions faster, organize work more efficiently, and thus reduce delays in operations. As a result, the turnaround time is reduced and the workflow bottlenecks are minimised. The findings are in line with Liu, Naveed, and Mustafa, who found that the spread of digital technology has a significant positive impact on the efficiency of banking [16], and with Abu Al-Haija et al., who found that the transformation platforms of digital banking have a significant positive effect on the efficiency of financial institutions [17].

It is also found that there is a strong positive correlation between frequency of use and cost efficiency ($r = 0.522$, $p = 0.000$), which indicates a moderate but significant correlation. This observation shows that regular and systematic use of technological systems plays a significant role in cost savings and efficient use of resources in commercial banks. The regular use of digital platforms reduces the use of manual processes, reduces administrative costs, and reduces the spread of errors that would otherwise result in financial loss. The more employees embrace the available technological tools, the better the costs related to paperwork, time wastage, and unnecessary processes are cut. This empirical data is consistent with the results of Fisabilillah et al., who reported that digitalisation improves the efficiency performance of commercial banks [18], and with the claims of Jameaba, who highlighted that digital transformation reduces the cost of operations and increases the productivity of the banking industry [19].

Moreover, the study finds that user competence and work coordination have a strong positive correlation ($r = 0.600$, $p = 0.000$). This means that the technological skills and competencies of employees are significant in enhancing coordination in commercial banks. Skilled users will be in a better position to manoeuvre digital systems, communicate effectively across departmental lines and coordinate tasks through collaborative platforms. In a dynamic banking setting where interdepartmental cooperation is essential, increased user competence levels minimize errors, increase responsiveness, and teamwork. This observation supports the results of Nesindande and Saurombe, who found that digital competence increases workplace performance in banking organisations [20], and the findings of Muduli and Choudhury, who found that workforce digital capability enhances organisational agility and coordination in the banking industry [21].

4. Conclusion

The research concludes that technology availability and time management efficiency, frequency of use and cost efficiency, and user competence and work coordination have significant positive relationships in commercial banks in Rivers State, Nigeria. These findings underscore the importance of digital technology infrastructure in improving the performance of operations in the banking industry. The delivery of high-tech systems enhances the use of time, speed of service delivery, and reduces delays in the workflow. In addition, the efficient and long-term utilisation of technological tools also helps to achieve cost efficiency through the elimination of redundancies, minimisation of manual errors, and efficient allocation of resources. Moreover, the level of competence of the employees in the use of digital systems significantly enhances the coordination of work, the interdepartmental cooperation, and the general responsiveness of the organisation.

The results are consistent with the available literature that acknowledges digital technology and workforce potentials as organisational strategic resources that facilitate efficiency and performance in financial institutions. On the whole, the research confirms that the sufficient supply of technological infrastructure, the active use of digital systems, and the constant enhancement of user competence are the key conditions to enhance the efficiency of operations and coordination in commercial banks in Rivers State.

Recommendations

Based on the findings of the study, the following recommendations are proposed:

1. The commercial banking institutions in Rivers State should invest in the purchase of strong and modern video-conferencing equipment, high-speed internet connectivity, and modern meeting equipment to reduce technological failures that can undermine the effectiveness of virtual meetings.
2. The commercial banks should integrate remote meeting platforms into their routine administrative procedures, which would simultaneously reduce the reliance on face-to-face meetings and the associated operational expenses.
3. The management of the bank ought to develop continuous training and capacity-development programmes to improve the technical skills of the employees, ease

navigation, and create a close familiarity with the advanced features of the cloud-based conferencing solutions.

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